

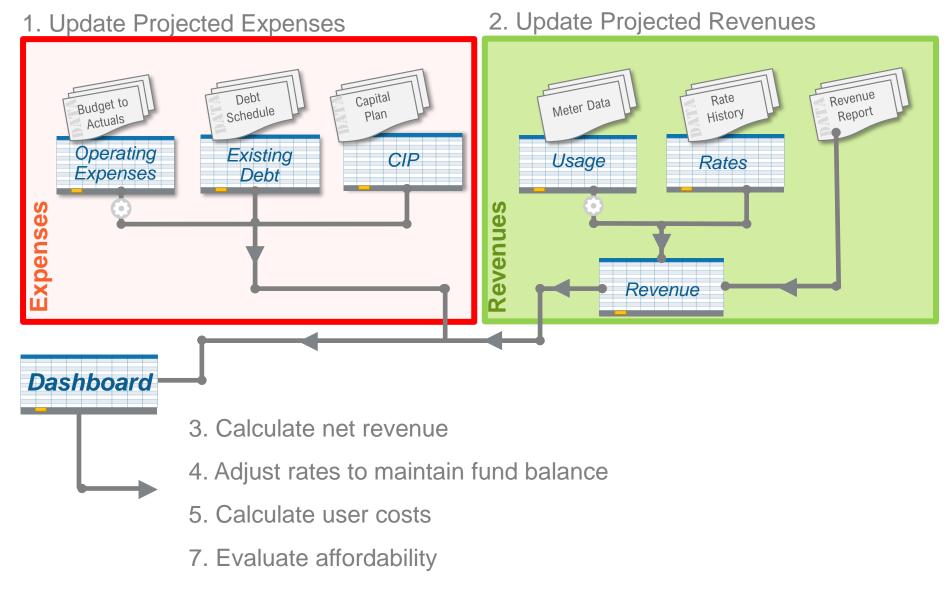
2023 WATER & SEWER RATE UPDATE

Uxbridge Water & Sewer Commission

Project Lead: Mike Schrader

2023 UPDATE: METHODOLOGY

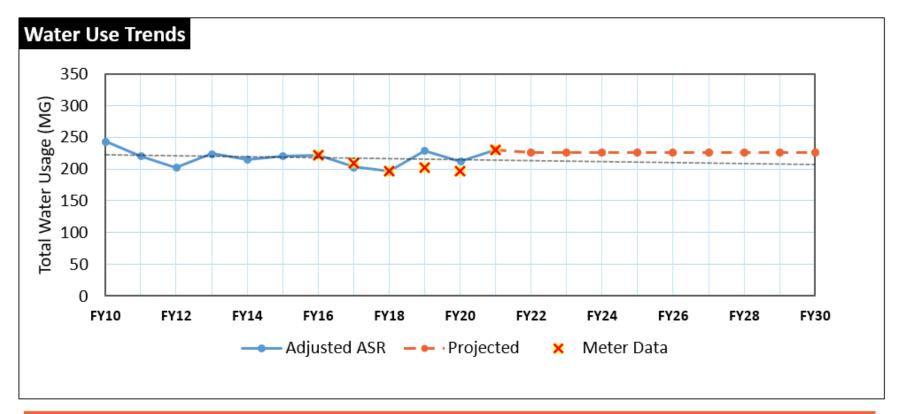
Update Previously Developed Water & Sewer Financial Models



WATER



2023 UPDATE: WATER USAGE EVALUATION



Historic & P.	Historic & Projected Water Use													
	Actual	Actual	Actual	Projected	Projected	Projected	Projected							
Block	FY19	FY20	FY21	FY22	FY23	FY24	FY25							
Tier 1	9,795,335	9,936,979	9,984,920	10,168,854	10,168,854	10,168,854	10,168,854							
Tier 2	10,319,988	9,964,453	11,639,339	11,208,674	11,208,674	11,208,674	11,208,674							
Tier 3	4,157,347	3,774,804	5,620,675	5,350,496	5,350,496	5,350,496	5,350,496							
Irrigation	2,831,872	2,661,642	3,501,105	3,501,105	3,501,105	3,501,105	3,501,105							
Total	27,104,542	26,337,878	30,746,039	30,229,129	30,229,129	30,229,129	30,229,129							

2023 UPDATE: WATER EXPENSES

System	Scope	Description	Funding Source	Interest Rate	E	stimated Cost	Cost Year	Esc. Factor	E	scalated Cost	Start Year	Term
Enterprise	Vehicle	W-6 REPLACEMENT	Rate		\$	70,000	2023	1.0 X	\$	70,000	2023	1
Source	Engineering	FACILITY & SOURCE PLAN (ARPA)	ARPA		\$	96,500	2023	1.0 X	\$	96,500	2023	1
Source	Engineering	PHASE 1 WELL DESIGN/PERMITTING (APRA)	ARPA		\$	174,700	2023	1.0 X	\$	174,700	2023	1
Source	Engineering	PHASE 2 WELL DESIGN/PERMITTING (APRA)	ARPA		\$	96,000	2023	1.0 X	\$	96,000	2023	1
Source	Construction	REPLACEMENT WELL DRILLING (ARPA)	ARPA		\$	1,000,000	2023	1.0 X	\$	1,000,000	2023	2
Distribution	Engineering	RT. 122 WM DESIGN	ARPA		\$	62,500	2023	1.0 X	\$	62,500	2023	1
Distribution	Engineering	RT. 16/ DOUGLAS WM DESIGN (ARPA)	ARPA		\$	61,100	2023	1.0 X	\$	61,100	2023	1
Distribution	Engineering	EAST ST. AREA IMPROVEMENTS DESIGN	ARPA		\$	398,000	2023	1.0 X	\$	398,000	2023	1
Distribution	Engineering	DOUGLAS ST. WESTSIDE IMP. DESIGN	ARPA		\$	489,500	2023	1.0 X	\$	489,500	2023	1
Enterprise	Vehicle	W-4 REPLACEMENT	Rate		\$	150,000	2024	1.0 X	\$	150,000	2024	1
Source	Construction	BLACKSTONE AND BERNAT WELL REPLACEMENT	Debt	4.5%	\$	2,000,000	2025	1.0 X	\$	2,000,000	2025	20
Source	Engineering	PFAS & MANANESE PILOT	Rate		\$	450,000	2024	1.0 X	\$	450,000	2024	1
Distribution	Construction	RT. 122 WM CONSTRUCTION	ARPA		\$	750,000	2024	1.0 X	\$	750,000	2024	1
Distribution	Engineering	LEAD SERVICE LINE PROGRAM (EST) (ARPA)	ARPA		\$	250,000	2024	1.0 X	\$	250,000	2024	1
Treatment	Engineering	BLACKSTONE WTP DESIGN	Debt	4.5%	\$	1,000,000	2025	1.0 X	\$	1,000,000	2025	5
Distribution	Construction	RT. 16/ DOUGLAS WM CONSTRUCTION	Debt	4.5%	\$	2,250,000	2025	1.0 X	\$	2,250,000	2025	20
Distribution	Construction	DOUGLAS ST. WESTSIDE IMP. CONSTRUCTION	Debt	4.5%	\$	3,626,000	2025	1.0 X	\$	3,626,000	2025	20
Distribution	Engineering	BLACKSTONE ST WM REPLACEMENT	Rate		\$	300,000	2025	1.0 X	\$	300,000	2025	1
Enterprise	Vehicle	W-3 REPLACEMENT	Rate		\$	65,000	2026	1.0 X	\$	65,000	2026	1
Distribution	Engineering	RT 122/MILLVILLE RD/ALBEE DESIGN	Rate		\$	325,000	2026	1.0 X	\$	325,000	2026	1
Enterprise	Vehicle	W-9 REPLACEMENT	Rate		\$	65,000	2027	1.0 X	\$	65,000	2027	1
Treatment	Construction	BLACKSTONE WTP CONSTRUCTION	SRF	0.0%	\$	15,000,000	2027	1.0 X	\$	13,020,000	2027	20
Distribution	Eng.+Const.	RT 122/MILLVILLE RD/ALBEE CONST	Debt	4.5%	\$	3,500,000	2027	1.0 X	\$	3,500,000	2027	20
Enterprise	Vehicle	W-1 REPLACEMENT	Rate		\$	70,000	2028	1.0 X	\$	70,000	2028	1
Distribution	Construction	EAST ST. AREA IMPROVEMENTS CONSTRUCTION	Debt	4.5%	\$	4,231,000	2028	1.0 X	\$	4,231,000	2028	20
Distribution	Engineering	HIGH STREET WM IMPROVEMENTS	Rate		\$	100,000	2028	1.0 X	\$	100,000	2028	1
Distribution	Construction	HIGH STREET WM IMPROVEMENTS	Debt	4.5%	\$	1,200,000	2023	1.2 X	\$	1,702,230	2029	20
Distribution	Engineering	RIVULET WM IMPROVEMENTS	Rate		\$	100,000	2030	1.0 X	\$	100,000	2030	1
Distribution	Eng.+Const.	RIVULET WM IMPROVEMENTS	Debt	4.5%	S	1,200,000	2030	1.0 X	S	1,200,000	2030	20

Notes & Key Points

1. Placeholder – confirm funding method

2. Assumed standard 13.2% Principal Forgiveness

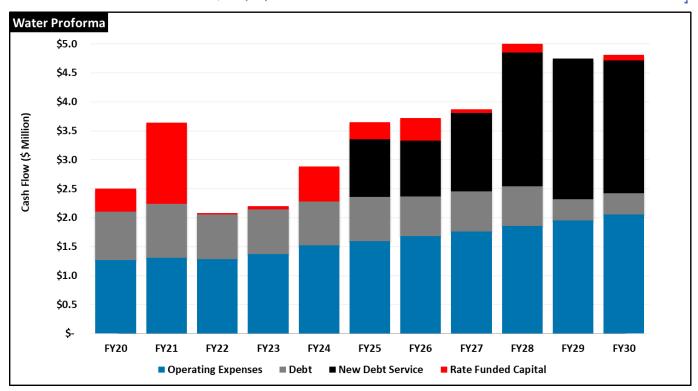
Tighe&Bond

ARPA

\$3,378,300

2023 UPDATE: WATER EXPENSES

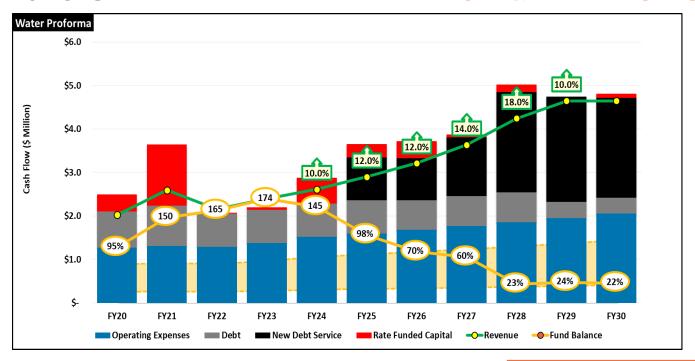
	E	xpense A	nalysis and	Trending								
			FY20 - FY23		FY24 ON							
Category		Average Budget	Trends	Avg Annual % Change		FY24 Budget	∆ FY23 - FY24	Escalator				
Salaries & Wages (Dept 450)	\$	540,270.67		▲ 10.7%	\$	690,267.00	▲ 3.3%	3.5%				
Repairs/Maintenance & Operations (Dept 4	\$	231,250.00	-	▲ 2.8%	\$	258,500.00	▲ 4.9%	5.0%				
Services (Dept 450)	\$	125,688.33		▲ 2.2%	\$	120,340.00	▲ 0.6%	5.0%				
Supplies (Dept 450)	\$	199,206.67	-	▼5.0%	\$	236,500.00	▲ 28.7%	8.0%				
Other Expenses (Dept 450)	\$	18,069.33		▼11.9%	\$	20,700.00	▲ 53.3%	8.0%				
Other Expenses (Dept 911, 912, 914, 916,	\$	98,352.67	-	▼3.5%	\$	148,068.00	▲ 57.2%	8.0%				
Other Financing Uses (OFS) (Dept 450)	\$	845,184.31		▼ 2.6%	\$	762,141.00	▼0.8%	3.5%				
Capital Outlay	\$	608,706.47		▼28.7%	\$	-	▼100.0%	2.5%				
Indirects	\$	72,598.00		▼13.4%	\$	44,800.00	▼3.7%	4.0%				
	\$	2,739,326.45										



2023 UPDATE: WATER REVENUE & EXPENSE SUMMARY

		Budget	Budget	Budget	Budget	Budget	Projected ⇒
Operating Expenses		FY20	FY21	FY22	FY23	FY24	FY25
Salaries & Wages (Dept 450)		\$506,373	\$547,206	\$567,233	\$668,197	\$690,267	\$714,426
Repairs/Maintenance & Operat	tions (Dept 450)	\$227,500		\$233,250	\$246,500	\$258,500	\$271,425
Services (Dept 450)	` ' '	\$112,385	\$113,740	\$150,940	\$119,640	\$120,340	\$126,357
Supplies (Dept 450)		\$216,320	\$190,500	\$190,800	\$183,800	\$236,500	\$255,420
Other Expenses (Dept 450)		\$21,008	\$13,600	\$19,600	\$13,500	\$20,700	\$22,356
Other Expenses (Dept 911, 91;	2, 914, 916, 945)	\$105,346	\$108,364	\$81,348	\$94,199	\$148,068	\$159,913
Indirects		\$77,846	\$98,900	\$41,048	\$46,500	\$44,800	\$46,592
Subtotal		\$1,266,778	\$1,305,310	\$1,284,219	\$1,372,336	\$1,519,175	\$1,596,490
	Delta Previous		▲ 3.0%	▼1.6%	▲ 6.9%	▲ 10.7%	▲ 5.1%
Capital Expenses		-			-		-
Rate Funded Capital		\$400,000	\$1,399,785	\$26,334	\$56,000	\$600,000	\$300,000
Debt		\$832,987	\$935,230	\$767,336	\$768,370	\$762,141	\$762,203
New Debt Service						\$0	\$993,220
Subtotal	Dolto Provious	\$1,232,987	\$2,335,015	\$793,670	\$824,370	\$1,362,141 65.2%	\$2,055,423
TOTAL EXPENSES	Delta Previous	\$2,499,765	89.4% \$3,640,325	-66.0% \$2,077,889	3.9% \$2,196,706	\$2,881,316	50.9% \$3,651,912
TOTAL EXPENSES	Delta Previous	\$2,455,765	35,640,525 ▲ 45.6%	\$2,077,889 ▼ 42.9%	\$2,196,706 ▲ 5.7%	32,001,310 ▲ 31.2%	35,651,912 ▲ 26.7%
ARPA funded Capital	Delta i Tevious		45.070	7 72.070	\$1,878,300	\$1,500,000	\$0
•							
_		FY20	FY21	FY22	FY23	FY24	FY25
Revenue	Rate Increase					10.0%	12.0%
Rate Revenue		\$ 1,634,688	\$ 1,926,920	\$ 1,279,609	\$ 1,944,068	\$ 2,138,474	\$ 2,395,091
Non-Rate Revenue		\$ 387,016	\$ 668,472	\$ 872,867	\$ 453,008	\$ 474,608	\$ 503,121
Total Revenue		\$ 2,021,703	\$ 2,595,392 A 17.9%	\$ 2,152,477 ▼33.6%	\$ 2,397,075 A 51.9%	\$ 2,613,083 A 10.0%	\$ 2,898,212 A 12.0%
Delta previous (Rate Revenue)			A 17.976	₩ 33.0%	▲ 51.9%	A 10.0%	12.0%
Net Revenue (Revenue-Expense)		\$ (403,069)	\$ (935,724)	\$ 136,924	\$ 266,270	\$ (181,794)	\$ (644,143)
Fund Balance		\$1,2 <mark>75,8</mark> 99	\$1,961,873	\$ 2,123,734	\$ 2,390,004	\$ 2,208,210	\$ 1,564,068
Retained Earnings as Percent of OpEx		95%	150%	165%	174%	145%	98%

2023 UPDATE: WATER REVENUE & EXPENSE SUMMARY



Water Rates

10.0%

Description	Туре	FY21	FY22	FY23	FY24
5/8"	Quarterly Fee	\$25.00	\$25.00	\$25.00	\$27.50
3/4"	Quarterly Fee	\$37.50	\$37.50	\$37.50	\$41.25
1"	Quarterly Fee	\$62.50	\$62.50	\$62.50	\$68.75
1.5"	Quarterly Fee	\$125.00	\$125.00	\$125.00	\$137.50
2"	Quarterly Fee	\$200.00	\$200.00	\$200.00	\$220.00
3"	Quarterly Fee	\$375.00	\$375.00	\$375.00	\$412.50
4"	Quarterly Fee	\$625.00	\$625.00	\$625.00	\$687.50
6"	Quarterly Fee	\$1,250.00	\$1,250.00	\$1,250.00	\$1,375.00
Tier 1	Usage	\$2.86	\$2.86	\$2.86	\$3.15
Tier 2	Usage	\$5.68	\$5.68	\$5.68	\$6.25
Tier 3	Usage	\$8.27	\$8.27	\$8.27	\$9.10
Irrigation	Usage	\$9.69	\$9.69	\$9.69	\$10.66

SEWER



2023 UPDATE: SEWER EXPENSES

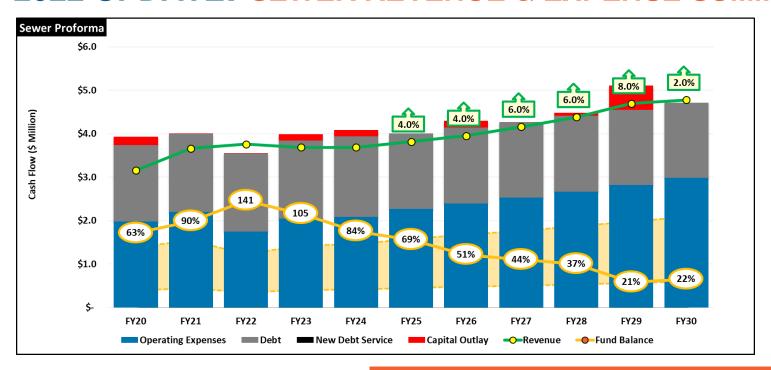
	Expense Analysis and Trending										
		FY20 - FY23									
Category	Average Budget	Trends	Avg Annual % Change		FY23 Budget		FY24 Budget	Δ FY23 - FY24	Escalator		
Salaries & Wages (Dept 450)	\$ 630,997	•	▲ 8.0%	\$	766,730	\$	788,477	▲ 2.8%	4.0%		
Repairs/Maintenance & Operations (Dept 450)	\$ 469,163	-	▼8.7%	\$	375,200	\$	369,500	▼1.5%	5.0%		
Services (Dept 450)	\$ 249,389		▲ 11.8%	\$	280,170	\$	279,070	▼0.4%	5.0%		
Supplies (Dept 450)	\$ 429,529	-	▲ 0.3%	\$	432,500	\$	436,500	▲ 0.9%	8.0%		
Other Expenses (Dept 450)	\$ 12,192	_	▲ 20.3%	\$	12,500	\$	20,400	▲ 63.2%	8.0%		
Other Expenses (Dept 911, 912, 914, 916, 945)	\$ 132,016		▲ 5.3%	\$	131,818	\$	209,600	▲ 59.0%	8.0%		
Other Financing Uses (OFS) (Dept 450)	\$ 1,784,614		▲ 0.8%	\$	1,796,091	\$	1,853,300	▲ 3.2%			
Capital Outlay	\$ 92,500		▼8.3%	\$	150,000	\$	150,000				
Capital Vehicles	\$ 4,778			\$	-	\$	-				
Indirects	\$ 70,573	-	▼17.8%	\$	46,500	\$	44,800	▼3.7%	4.0%		

C	Capital Improvement Plan - Sewer													
ID	System	Scope	Description	Funding Source	Interest Rate	Es	stimated Cost	Cost Year	E	scalated Cost	Start Year	Term		
1	Enterprise	Equipment	Replacement for Landfill Mover	ARPA		\$	45,000	2023	\$	45,000	2023	1 1		
2	Enterprise	Equipment	S5 Replacement F250	Rate		\$	65,000	2026	\$	65,000	2026	∄ 1		
3	Treatment	Equipment	S2 Replacement F550	Rate		\$	90,000	2026	\$	90,000	2026	1 1		
4	Distribution	Equipment	S1 Replacement F250	Rate		\$	65,000	2028	\$	65,000	2028	∄ 1		
5	Source	Equipment	S4 Replacement Jet/Vac	Rate		\$	500,000	2029	\$	500,000	2029	1 1		
6	Enterprise	Equipment	S3 Replacement F250	Rate	-	\$	65,000	2029	\$	65,000	2029	∄ 1		
					TOTAL	\$	830,000							

2023 UPDATE: SEWER REVENUE & EXPENSE SUMMARY

			Budget FY20		Budget FY21		Budget FY22		Budget FY23		Budget FY24	Pro	ojected ⇒
Operating Expenses			1120		F121		F122		F120		F124		F120
Salaries & Wages (Dept 450) Repairs/Maintenance & Operation Services (Dept 450)	s (Dept 450)	\$ \$	618,741 506,850 206,796	\$ \$ \$	570,755 529,700 406,990	\$ \$	567,760 464,900 103,600	\$	766,730 375,200 280,170	\$ \$,	\$ \$	820,016 387,975 293,024
Supplies (Dept 450) Other Expenses (Dept 450) Other Expenses (Dept 911, 912, 9 Indirects	14, 916, 945)	\$ \$ \$	428,215 7,769 113,735 100,000	\$ \$ \$	415,700 16,000 162,857 100,000	\$ \$ \$	119,655	\$ \$ \$	131,818	\$ \$ \$	20,400 148,068	\$ \$ \$	471,420 22,032 226,368 46,592
Subtotal	Delta Previous	\$	1,982,106	\$	2,202,002 11.1%	\$	1,745,906 -20.7%	\$	2,045,418 17.2%	\$	2,086,815 2.0%	\$	2,267,427 8.7%
Capital Expenses													
Capital Outlay Debt New Debt Service		\$ \$	200,000 1,752,798	\$	10,000 1,793,300	\$,	\$ \$	150,000 1,796,091	\$ \$	150,000 1,853,300	\$ \$ \$	- 1,744,494 -
Subtotal	Delta Previous	\$	1,952,798	\$	1,803,300	\$	1,806,266 0.2%	\$	1,946,091 7.7%	\$	2,003,300 2.9%	\$	1,744,494 -12.9%
TOTAL EXPENSES			\$3,934,904		\$4,005,302		\$3,552,172		\$3,991,509		\$4,090,115		\$4,011,921
	Delta Previous						-11.3%		12.4%		2.5%		-1.9%
ARPA funded capital			\$0		\$0		\$0		\$45,000		\$0		\$0
			FY20		FY21		FY22		FY23		FY24		FY25
Revenue	Rate Increase												4.0%
Rate Revenue		\$	2,305,000	\$	2,577,532	\$	2,552,294	\$	2,873,702	\$	2,873,702	\$	2,988,650
Non-Rate Revenue Total Revenue		\$	848,408 3,153,408	\$ \$	1,086,444 3,663,976	\$ \$	1,206,838	\$	813,730 3,687,432	\$ \$	813,730 3,687,432	\$	827,779 3,816,429
Delta previous (Rate Revenue)		Đ	3,153,408	\$	272,532	\$	3,759,132 (25,238)	\$	321,408	\$	- 5,087,432	\$	114,948
Net Revenue (Revenue-Expense)		\$	(781,496)	\$	(341,326)	\$	206,960	\$	(304,077)	\$	(402,683)	_	(195,492)
Fund Balance			\$1,711,480		\$1,985,263		\$2,460,946		\$2,156,869		\$1,754,186		\$1,5 <mark>58,6</mark> 94
Retained Earnings as Percent of OpEx	l		63%		90%		141%		105%		84%		69%

2022 UPDATE: SEWER REVENUE & EXPENSE SUMMARY



Sewer Rates

Description	Туре	FY21	FY22	FY23	FY24
Base Charge	Quarterly Fee	\$104.85	\$110.10	\$115.59	\$115.59
Usage	Usage	\$16.78	\$17.62	\$18.50	\$18.50
Flat Rate	Quarterly Fee	\$273.00	\$286.65	\$300.98	\$300.98

RESIDENTIAL FINANCIAL BURDEN & AFFORDABILITY

Measuring Affordability. Affordability, like temperature, is highly subjective. To determine whether or not water and sewer costs represents a financial burden we use the two most common and appropriate indicators.

Annual Cost for 3 person household using 60 gallons per day each																	
Utility		FY22		FY23		FY24		FY25		FY26		FY27		FY28	FY29		FY30
Water	\$	508.66	\$	508.66	\$	559.52	\$	626.67	\$	701.87	\$	800.13	\$	944.15	\$ 1,038.57	\$	1,038.57
Sewer	\$	1,424.07	\$	1,495.23	\$	1,495.23	\$	1,555.04	\$	1,617.24	\$	1,714.27	\$	1,817.13	\$ 1,962.50	\$	2,001.75
Total	\$	1,932.73	\$	2,003.89	\$	2,054.75	\$	2,181.71	\$	2,319.11	\$	2,514.40	\$	2,761.28	\$ 3,001.07	\$	3,040.32
Increase	\$	67.81	\$	71.16	\$	50.87	\$	126.95	\$	137.40	\$	195.30	\$	246.88	\$ 239.79	\$	39.25

The Residential Indicator. Adopted from EPA guidance developed in the late 90's to determine the cost impacts of federal regulatory programs, this indicator divides the total annual cost of water and sewer and divides it by the median household income. A score of 4% or more is considered to be a financial burden.

Residential Indicator: Total Annual Cost as % Median Household Income (MHI)													
Scenario	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30				
Total	1.9%	2.0%	2.0%	2.1%	2.3%	2.5%	2.7%	2.9%	3.0%				

The Household Burden Indicator. Introduced in 2019, this indicator is based the lowest quintile income (the lowest 20%), which is more representative of household financial status. The second component, the Poverty Prevalence Indicator is the percentage of the community below 200% of the Federal Poverty Level. The burden is determined by using the chart below.

Housefold Burden Indicator (HBI): Total Annual Cost as % Lowest Quintile Income (LQI)														
Scenario	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30					
Total														

Uxbridge Income Data (US Census)

Median Household Income: \$101,859

Lowest Quintile Income: \$41,214

Poverty Prevalence Indicator: 16%

Household Burden Indicator	Poverty Prevalence Indicator		
	>= 35%	20% to 35%	<20%
> = 10%	Very High Burden	High Burden	Moderate – High Burden
7% to 10%	High Burden	Moderate – High Burden	Moderate - Low Burden
<7%	Moderate - High Burden	Moderate - Low Burden	Low Burden